Exploring Interprofessional Education: Through the Values of the Students and the Eyes of Exemplary Faculty

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Abstract

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Interprofessional education (IPE), which "occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes" (World Health Organization, 2010), has become an emerging priority in healthcare education and research. Much of the research focuses on student and program outcomes with minimal consideration about the role of faculty in implementing high quality IPE. This dissertation aims to further understand the qualities, skills, and behaviors necessary for IPE faculty to excel at IPE through two separate yet intertwined studies.

Both studies are influenced by the research method Positive Deviance (PD). A case is made for use of PD by comparing and contrasting PD to Appreciative Inquiry. The first quantitate study looked at student's perceptions of IPE faculty qualities found in the literature. The second study built off the student's perceptions by draws connections about exemplary IPE faculty from the interviews of 8 IPE faculty members.

Together the studies form a picture of what an exemplary IPE faculty member looks like. Concise lists of qualities, skills, and behaviors have been generated and a model of IPE faculty development has been proposed. The addition

of this data on IPE faculty supports future work including faculty development and evaluation as well as further research.

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Chapter One - Introduction

"Teaming up with teamwork together as a team"-Odd Squad, PBS series

I love being a nurse—it is not just a job or even a professional for me. It's a title that I have worked hard to gain and one that I hold proud and dear to my heart -- now. But I would be a liar if I stated that I always wanted to be a nurse. If you had asked my 5-year-old self what I wanted to be when I grew up, I would have exuberantly puffed out my chest and stated "surgeon". As time went by I morphed from surgeon to respiratory therapist, from paramedic to family practice physician but never did it cross my mind to be a nurse. Luckily I fell into nursing when the realities of the grown-up world shook my childhood ideals. Because I came into nursing unsure if I really was or wanted to be a nurse, I spent a lot of time observing other professions and "trying them on for size". Through these observations I came to the realization that each healthcare profession is just one cog in the healthcare machine and that this beast of a machine only runs well when we all work together.

Now this may seem like common sense, and maybe it is, but professional teamwork—especially interprofessional—has not been built into the American healthcare system. A quick look through the history books identifies great divides among professions. These divides often follow gender and social lines, giving fuel to long-embedded stereotypes about the kinds of people who practice each profession as well as what their role and hierarchical position are. The examples are not limited to history books: pop culture and media continue to perpetuate many of these stereotypes. Even the very schools and classrooms where we learn to practice our professions are often socializing the next generation in unprofessional pride and grandeur.

There are more concerns about the effect of a lack of teamwork then just a bumpy, ineffective healthcare machine (although from an economic stand point this is an important issue). Lack of interprofessional teamwork can lead to poor patient care including errors, omissions, redundant tests, and erosion of trust. In addition, poor morale, a negative work climate, and limited collaboration and respect can all impact health care team members and their ability to perform and enjoy their professions. Everything I have learned has reinforced the powerful value of interprofessional practice.

So exactly what is meant by the concept of interprofessional practice? Interprofessional practice is what we strive for in the healthcare system. It is the ideal work environment in which members of each health care profession not only work together but communicate with respect, and fully collaborate with each other for optimal patient outcomes. Although there are places where this utopia naturally occurs, for the most part it requires intentional behaviors, structural changes, and targeted education.

Education targeting interprofessional practice has been termed interprofessional education or IPE. IPE can be found in the literature from around the 1960s, when organizations such as the American Medical Student Association (AMSA) and the Office of Economic Opportunity (US government) began funding volunteer projects and team seminars (Baldwin, 2007, p. 25). IPE continued to gain popularity and support throughout the 1970s, as demonstrated by a number of new educational programs (Rubin, Plovnick, & Fry, 1975), books *(*Wise, Beckhard, Rubin, & Kyte, 1974*),* university-based-programs, and funding organizations (Baldwin, 2007, p. 27). Unfortunately, declining funding and changing priorities in the 1980s negatively impacted many IPE programs and most did not survive that decade. The 2000s inspired a renewed interest in and dedication to IPE

due to the global and national call for improved healthcare amidst increasing complex healthcare systems and workforce shortages (WHO, 2010, p. 12). One of the biggest driving forces on a national level is healthcare reform. Once again there are a number of new IPE programs, opportunities, publications, and discussions.

The majority of current IPE publications and programs focus on the learners. Did the learner learn *X* from this IPE session? What skills or knowledge should IPE activities teach the learner? Does this type of educational activity teach learners the concepts of IPE? All of these questions are valuable to understanding and developing IPE but leave an important group of participants out of the discussion—the educators. By bringing the teachers, instructors, faculty, facilitators— whatever term you find in use—back into the discussion, we not only benefit from their experience and knowledge but also see another dimension of IPE. We could begin to ask questions such as what do IPE faculty need to know? What empowers instructors to provide high quality IPE instruction? What does high quality IPE instruction entail? What is the ideal role of an IPE facilitator?

It is with those questions swirling in my head that I found myself wanting to learn more about exemplary educators I observed teaching IPE. Expanding the knowledge about IPE educators seemed like a valuable way to support the mission to implement, promote, and execute effective IPE programs, with the ultimate goal of improving healthcare, one student at a time. It is with this mission in mind that I proceeded with my dissertation work.

Following this introduction is a collection of three manuscripts that together tell the story of my dissertation work. The first manuscript discusses the research methodology, positive deviance, I chose to explore exemplary IPE educators. This first

manuscript strives to introduce the research methodology of positive deviance by highlighting its relationship to a similar research methodology, appreciative inquiry. Chapter two compares and contrasts these qualitative methodologies.

The second manuscript, Chapter Three, builds on the existing literature around effective IPE educator qualities by comparing and contrasting data collected from a student survey to existing literature. The student data, collected from a diverse representation of medical, nursing, pharmacy, dentistry, and physician assistant students, adds another type of evidence to the current literature and provides insight into the interaction between student and educator in the IPE learning arena. The combination of these first two manuscripts lays the theoretical and methodological foundation for the third manuscript.

Chapter Four is the culmination of my dissertation research. This manuscript presents the results of a qualitative research study of exemplary IPE faculty. The goal of this study was to highlight the qualities, behaviors, and teaching strategies of exemplary IPE faculty. Implications from this study will allow for improved IPE faculty development and support. In addition, the developmental model identified from the findings offer avenues for future research.

In Chapter Five, I offer my reflections on my dissertation. I will recap what was learnt from my research and how it can be used in the IPE community. Also, I will share my future hopes for building off of my dissertation work as I begin the journey of PhD prepared nurse.

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Chapter Two - Making the Case for Positive Organizational Scholarship: A Comparison and Contrast of Positive Deviance Methodology and Appreciative Inquiry

The Power of Positivity

The goal of research has always been to answer questions, solve problems, better understand phenomena, and appease scientific curiosity. The methodologies, methods, and viewpoints used to reach those goals vary considerably. Research methodologies also have adapted to changing cultural values, as witnessed by the examples of the evolution of subject consent and the development of participatory research. It is now time to look at the value of framing social healthcare research from a positive viewpoint rather than the more common deficit-focused perspective (Dutton & Glynn, 2008). Most healthcare studies aim to understand what is wrong (Bradley et al., 2009; Mayne, 1999); one can find studies on poor health outcomes, the presence of pathogens, and effects of negative staffing ratios. This limited approach focuses exclusively on how to improve from a negative state to a state of normal, which disregards the other side of the spectrum where a state of normal improves to a positive state (Dutton & Sonenshein, 2007). While negative-focused research is valuable, does it provide enough information to address the range of possibilities within a health-related phenomenon? Do the results lend themselves to timely and meaningful interventions? When the answer to these questions is no, it is time to consider positive scholarship.

Positive organizational scholarship (POS) is an emerging research movement focusing on the study of positive phenomena and the processes that produce them (Cameron & Caza, 2004). Positive phenomena refer to positive outcomes, which are

often elevated, excellent outcomes but may also be normal outcomes within a negative environment. A positive phenomenon is a broad term encompassing positive growth. To illustrate, think about two students who are both failing in school. After attending a new study group, one gets an A and the other gets a D on their next exams. The A would be viewed as a highly positive outcome. Yet positive phenomena could be used to describe both results, because both students improved their grades since the student with the D previously had an F grade. Change occurs on a continuum and that any growth towards a positive state represents a positive phenomenon. The literature also uses the term *flourishing,* referring to the optimal range of human functioning (Dutton & Sonenshein, 2007). The concepts of POS are not new, but the conscious decision to use this perspective to guide research has not been common.

Considered a research perspective, POS does not have a prescribed method for how a researcher should conduct research. The literature suggests that two research methodologies, Positive Deviance (PD) and Appreciative Inquiry (AI), may be useful for POS (Dadich et al., 2015; Dutton & Glynn, 2008). Developed in the 1980s, both PD and AI are frameworks with corresponding methods. They have been used in different fields over the past 30 years with both supporters and naysayers, but are growing in popularity among POS researchers.

Positive Deviance

What is Positive Deviance? Positive deviance is a problem–solving approach that capitalizes on the belief that for every problem there are outliers who regularly conquer the problem against the odds (Pascale, Sternin, & Sternin, 2010, p. 2). These outliers, termed positive deviants, are individuals who have unique behaviors and actions

that allow them to successfully address challenges in their community even with the same limited resources as their peers (Pascale et al., 2010). Positive deviance (PD) is not a research model or solution generator; rather, it is a mindset and an approach to behavioral and social change (*Positive Deviance*). The goal of the PD approach is to facilitate a pathway for community-directed, sustainable change (Positive Deviance Initiative, 2010, p. 3). Better Evaluation, an online international collaboration for the improvement of evaluation practice and theory, summarized the mindset of the PD approach as five core elements:

1. Communities possess the solutions and expertise to address their own problems.
2. Communities are self-organizing entities with enough human resources and assets to derive solutions to their collective problems.
3. Communities possess "collective intelligence" which the PD approach seeks to foster and draw out.
4. The foundation of the PD approach is sustainability and the act of enabling a community to discover its own solutions.
5. Behavior change is best achieved through practice and the act of doing (Zhao & Gallant, 2012).

The PD approach has been operationalized into a specific research approach, the PD research method, (Pascale et al., 2010; PositiveDevianceInitiative, 2010) that scientists have used and found helpful. This method shares many characteristics with community-based participatory action research and critical philosophy (table 2-1). Two key features of the PD approach are the involvement of the community and the attitude of the researcher to research *with* rather than *on* the community. The PD method also minimizes

the researcher's role to that of *guide* instead of *expert* and requires community involvement during every step of the process. The strength of this method is also its major disadvantage; it requires the commitment and work of the community. Working with communities can be time-consuming and fluid, requiring the researcher to be fully dedicated to the process and still comfortable with a high level of flexibility. From a traditional empirical research viewpoint, the PD method fails to control for confounding variables or produce generalizable results. However, the value of all research is not bound exclusively to the empirical research philosophy, allowing for the expansion and appreciation of methods such as PD.

It is important to note, that not all researchers who conduct research with a PD approach use the PD method. Some PD researchers modify the method (Griffith et al., 2013), with the most common modification being the involvement of the community during each stage (less involvement then recommended by the method). However, there are a few universal steps to ensure that research remains true to the PD approach, which have gained widespread agreement among PD scholars. While there are a variety of different descriptions for these universal steps, the Positive Deviance Initiative (2010) and Bradley et al. (2009) simplify them to three key points:

1. Identify the Positive Deviants: who in the community should we study?
2. Discover what makes them successful: study the positive deviants using the most appropriate data collection process for that particular problem and community
3. Share the results with the community: allow the community to learn about and intervene with their problem by sharing the results of the research.

The PD method tends to align best with qualitative approaches due to its exploratory nature, but this is not a set rule. A critical feature of the PD method is sampling. Sampling is the process of selecting a subset of the study population to be studied as representative of the population. In the PD process, sampling is unique because the underlying principle of PD is that there are positive deviants in the community and those people are who we want as our sample. Sampling is an important yet subtle component of a PD project because of its influence on who is identified as a positive deviant and what perspective becomes the focus of the research. Perspective in the research world is based on the ideology the researcher believes and practices (Polit, 2012, p. 507). Although perspective has not been directly discussed in the PD literature, one may induce that PD methodology, like its fellow community-based participatory research methods, draws from the transformative paradigm. The transformative paradigm is a world view stating that research must be conducted and used in a manner that illuminates the power structures of society (Hodges, 2014; Mertens, 2007; Swartz, 2014), with one way being to reflectively review the perspective, or view, of the research. Every researcher, community, sample, and positive deviant has a specific viewpoint; the goal then is not to remove the viewpoint but rather to acknowledge and discuss the pros and cons of that viewpoint. Research, especially situational community research, must work within the limits of real life, but that does not excuse one from being unaware of the research's limitations. Therefore, taking the time to make a conscious choice about sampling allows the researcher to fully understand the potential implications for the community of the research. When reviewing PD studies (Kegler et al., 2013; Marra, PavaodosSantos, Neto, & Edmond, 2013; Po, 2011; Zaidi et al., 2012) one sees a wide variety of sampling

techniques to allow for the needed perspective that will meet the needs of the community. In a study about interprofessional education faculty, this researcher chose to sample their students versus the faculty members' peers to identify the positive deviants (Lagunas, 2016). By choosing to sample students, the researcher made the decision that students' perspectives were most valuable to the identification of strong IPE faculty. This choice frames the research from the student perspective and reinforces the explicit statement that the value of an IPE faculty is in their ability to interact with students.

What makes PD valuable? PD is valuable for three main reasons. First of all, the PD approach focuses on positive phenomena and the natural capital existing within a community. Focusing on positive phenomena is an asset. It allows researchers to see problems from a different perspective, opening new space for innovative questions and solutions. Additionally, looking for the positive in a situation is more conducive to working with communities and building relationships with research participants.

The second reason is that the PD approach requires the researcher to present the research findings to the community. This means that the research findings from either the PD approach or PD method are not just for the researcher and the academic community, but are also for the use of the participants' community. Ideally, this return of findings will shorten the implementation timeframe of any intervention developed from the research, allowing the community to benefit directly.

The third reason a PD approach and method is valuable to researchers is that it often provides the basis for low resource, sustainable interventions that are culturally appropriate for the participating community. This occurs because the research is conducted within the community looking at community members, the positive deviants,

who are already conquering barriers and problems. Sternin and Sternin's (Pascale et al., 2010) classic PD project, addressing pediatric malnutrition in rural Vietnam, illustrates this point well. Their research findings showed that, within a community where underweight children were the norm, families of well-nourished children implemented three unique behaviors. They performed routine hand hygiene, allowed their children to finish their breakfast midday, and added small shrimp and greens to rice. These research findings, when returned to the community, became an easy intervention to implement because the intervention was specific to the community, culturally sensitive, and required minimal additional resources. Community members already had access to all necessary materials and were lacking only in knowledge or motivation to change their behavior.

Appreciative Inquiry

What is appreciative inquiry? Appreciative inquiry (AI) was developed by David Cooperrider and Suresh Srivastva in the late 1980s as a philosophical theory stemming out of the field of organizational behavior (Bushe, 2011). AI distinguished itself as a unique theory through its key focus on a positive lens rather than a problem-based lens (Mather, Peter, Hulme, Eileen, & eds., 2013) and as a generative change process (Bushe, 2011). Similar to PD, AI is both a research-influencing theory and a research method. Cooperrider originally intended AI to be a philosophy that researchers and management could use to inspire change in their organizations; over time, AI has been operationalized into a malleable method. In the last 20 years, the AI method has seen many changes and still functions in various formats; however, the most accepted method is referred to as the 4D method (Bushe, 2011).

The 4D method consists of four stages: discovery, dream, design, and destiny. Each stage works in a creative, generative manner to lead the study population to process change. Discovery is the first stage and includes data collection. AI data collection is almost exclusively qualitative, using a narrative form. In most instances, all members of a study population will be asked to reflect on their "best of" experiences around particular phenomena. These data are then analyzed as an inspiration point for the next stage, dreaming, and as a foundation for understanding the research topic. The dreaming stage is an opportunity for the sample population to imagine what their concept of best looks like for a given situation and then brainstorm how to reach that goal. This stage is truly an organic process that encourages everyone involved to be creative. The following stage, design, is more concrete, with a focus on operationalizing those dreams into a proposal for execution. Following the design of a proposal, the 4D method wraps up with destiny, sometimes referred to as delivery. Destiny is the stage in which change is to occur.

It is also important to note that AI theory and method have roots in both post-modern philosophy and in grounded theory (Bushe, 2011). The influence of grounded theory is especially apparent in the inductive, cyclic nature of the process. Post-modern philosophy's influence is a little less apparent but equally vital. Post-modern philosophy reminds the researcher that research is never truly separate or benign from the study population. Within AI, this belief manifests itself as a strong desire to have the study population as actively involved in the process as possible so that the research is a reflection of the population rather than the researcher.

What makes AI valuable? AI is a popular theory and method in the qualitative research community. It has been used in numerous fields beyond organizational behavior,

including education (Harrison & Hasan, 2013), community health (Paige et al., 2015), and medical education (Osterberg, Swigris, Weil, & Branch, 2015), with useful results. Some researchers even credit AI as one of the precursors to POS (Bushe, 2011). Overall, the AI method has become widely used in research.

Comparing and Contrasting Positive Deviance and Appreciative Inquiry

Similarities. It is perhaps easier to see the similarities between PD and AI than the differences. The most obvious similarity is that both play the dual role of framework and method. This dual role may be why it is hard to understand either approach fully. Both PD and AI were developed in the 1980s out of an increased interest in the value of positivity and the desire to see problems as opportunities for a community to grow rather than proof of it being a flawed entity requiring experts to fix it. Additionally, both approaches strongly advocate for the power and involvement of the community in both the research process and the generation of interventions.

Both PD and AI approaches are community-specific, limiting their generalizability. Data collected with a PD approach is very specific to the community from which it came, which can dramatically limit generalizability. Similarly, since an entire community may generate data collected using AI the data will reflect the context of a particular community.

Differences. Although both PD and AI believe in the power of the community, they define this power in different ways. The PD approach states that the community already has the solutions within its positive deviants, and that the purpose of the method is to help the community see and use these solutions. AI believes that the community is capable of envisioning a better community and then working towards this ideal (Bushe,

2011). Both approaches believe the community is the basis for the solution and has the ability to change; PD functions on the premise that the solution already exists and just needs to be acknowledged or found, while AI believes the solution may not exist but can be generated by the community itself. This difference may appear to be semantics but it is critical to both the research approach and resulting findings. This difference also lays the foundation for the next difference between PD and AI, which is the level of concreteness applied to the process.

PD has an increased focus on concrete outcomes for both data collection and identification of potential interventions. PD's focus manifests in the commonly-used data collection question, "What behaviors, skills, or traits do the positive deviants have that allows them to be successful?" This approach is in contrast to AI, in which data collection focuses on idea inspiration and creative generation of interventions. PD aims to uncover existing interventions and share them throughout the community while the goal of AI is to inspire the community to envision and implement new ideas for change.

This difference in concreteness is also identifiable in the types of topics and issues that tend to be addressed. Since the PD process requires the identification of a positive deviant in the community, PD needs a specific issue (example: malnutrition or low graduation rates) to drive the research. AI can also be used with a specific issue but its process is more flexible and can be used with more global cultural or organizational issues (example: discriminatory behaviors in the workplace).

Another difference between PD and AI centers on the purpose of data collection and the type of data collected. As highlighted in figure 2-2, PD and AI use data with different goals in mind. PD collects data with the intent of using it to directly influence

the rest of the process. AI may also use data this way but more often uses data as a starting point for the inspiration and generation of ideas and future proposals. Data in PD might be compared to fuel for the engine, whereas data in AI is like the ignition switch. The type of data valued by PD and AI also varies. PD values a diverse variety of data. Although PD research tends to use qualitative data; especially observation data, a wide variety of data types can be found in the literature. In contrast, AI values narrative data.

Sampling also is very different between PD and AI. PD only samples the positive deviants who are identified within the community. This might be through empirical means (example: children's body weight) or through identification by community members, (example: nomination for "best" interprofessional educators). In contrast, AI samples all available participants from the community around their *best-ever narrative*. This difference in sampling influences the findings resulting from each approach. While PD describes both the barriers faced and how real successes are achieved within those constraints for selected members of a community, AI describes hoped-for or positive aspirations across all members of a community.

Making the Case for Positive Organizational Scholarship

Researchers interested in positivity and POS first need to determine if this perspective is the right fit for their research question. Positivity has a number of advantages, but it is not appropriate for all projects. Once committed to POS, researchers need to reflect upon and interact with the community. What kinds of issues will the project address? How involved will the community be? What are the project goals and do those goals reflect the needs of the community? After this step is completed, the researcher decides if a framework to guide or a method to direct the project is needed.

This information will also help determine which approach might be a better match. Researchers are encouraged to review PD and AI studies on similar topics to better visualize the process. Both PD and AI are flexible, but every change made to the method must be transparent, justifiable, and remain true to the framework.

Tables and Figures

Table 2-1: Positive Deviance Research Method

Stage of method	Steps	Details
i. Ensure community involvement	Confirm that the community affirms the identified problem and that PD individuals exist within the community	
	Introduce the PD approach and process	Demonstrate how it works and provide pros and cons of this process
	Invite the community and leadership to be a part of the process	If no one accepts there is no reason to continue the process
ii. Build a team of community volunteers	Strive for volunteers who are interested but not obligated	
	Educate them on the PD approach and process	
	Stimulate self-discovery about their view of the problem	
iii. Engross the community in the PD process	"The 4 Ds" (PositiveDevianceInitiative, 2010, p. 6)	• Define—the problem, perceived causes, challenges and constraints, current practices and solutions, as well as desired outcomes • Determine—the presence of PD individuals • Discover—what are the uncommon but successful behaviors and strategies of the PD individuals through observation and inquiry • Design—activities to allow the rest of the community to learn through practicing/doing the newly discovered behaviors • Monitor and evaluate change in the community's problem
iv. Respect the PD process		

Figure 2-1- Differences between Positive Deviance and Appreciative Inquiry

Positive Deviance	Appreciative Inquiry
a) Influenced by critical research methodology b) Grew out of public health discipline c) Centers on the belief that the community already has the solution d) Strives for concrete solutions to social problems e) Able to address concrete specific issues best f) Uses data to directly influence the research process g) Values diverse sources of data h) Samples only the community's positive deviants	a) Influenced by qualitative, constructionist research methodology b) Grew out of the organizational behavior discipline c) Centers on the belief that the community is capable of envisioning a solution d) Strives to inspire organizational change through dreaming and working towards destiny e) Able to address a wide variety of issues including social and organizational issues f) Uses data as a starting point for the inspiration and generation of ideas and future proposals g) Values narrative data h) Samples positive narratives from all members of the community

Figure 2-2: Visual comparison between Positive Deviance and Appreciative Inquiry methods

	Positive Deviance		**Appreciative Inquiry**	
Data directly drives each step	1. Identify Positive Deviants a. Focus on specific issue	Data Collection	1. Discovery a. Collect data	Data inspires and gives suggestions
	2. Study Positive Deviants a. Prioritize behaviors, actions, and beliefs		2. Dream a. Generate ideas	
	3. Uncover what makes Positive Deviants successful a. Analysis data		3. Design a. Create proposal	
	4. Share results with community a. Disseminate and translate		4. Destiny a. Inspire change	

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Chapter Three - Students' Perceptions of the Qualities of Faculty with Exemplary Interprofessional Education Teaching Skills

Background

Teaching can be viewed as an interaction between an instructor and student in which the student learns from what the teacher says or demonstrates. This seems to be especially true when interpersonal skills are being taught. In the realm of healthcare education, interprofessional education (IPE) strives to teach students how to successfully work in interdisciplinary teams in order to provide safe, high quality and appropriate patient-centric healthcare. IPE is defined as education that "occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes"(W.H.O., 2010). The core elements of IPE—communication, values, roles, and teamwork (I.P.E.C., 2011)—also involve teaching interpersonal skills. Hence, teaching IPE can be challenging and involve unanticipated issues. There is a growing interest in the IPE teaching community to better understand the learning relationship between student and instructor with particular interest in how to prepare successful IPE instructors.

A recent unpublished literature review (Lagunas, 2014a) found only 12 IPE (defined as at least two different professions learning together about each other) articles that met the inclusion criteria of focusing exclusively on IPE activities and presenting knowledge about the "successfulness" (usefulness, effectiveness, or evaluation) of teaching and/or learning strategies. A very flexible definition was used for teaching and/or learning strategies since there are a wide variety of terms used in the literature. Examples include specific terms like case-based learning and generic terms like learning

activities. These strategies can also be referred to as the "intervention" in educational research, adding additional complexity when performing a literature search. The articles ranged from literature reviews and theoretical papers to research articles. None of the research articles presented studies comparing teaching or learning strategies; instead, they all collected post-study data. The majority of the data came in qualitative reports of a recent IPE experience or class from the student perspective.

Eight of the 12 articles provided content specific to the identification of four qualities of successful IPE instructors (being an IPE role model, being willing to try new teaching strategies, possessing strong communication and discussion skills, and functioning as a facilitator) (table 3-1). Additionally, the literature suggests that successful IPE instructors are dedicated, flexible, and skilled facilitators. Interestingly, the four key qualities identified are a mixture of professional skills and personal behavior. For example, the literature supports the theory that students value and desire faculty that are invested in both the teaching and the practice of IPE. This personal investment in IPE is often demonstrated through modeling behaviors; thus, being an IPE role model is the first quality of a successful faculty.

The additional three qualities of successful IPE faculty identified in this literature review include being willing to try new teaching strategies that are more skills-based, possessing strong communication and discussion skills, and functioning as a facilitator. Faculty often use teaching styles and strategies with which they themselves were taught (Wurdinger & Carlson, 2010). Unfortunately, this behavior, as illustrated in Barr, Koppel, Reeves, Hammick, and Freeth's 2005 literature review, is a concern with IPE, where more traditional teaching styles and strategies have proven to be unsuccessful. Thus, the

willingness to try new things is consistently identified as an important quality of IPE faculty. This willingness is a skill that can be encouraged by others through creating a supportive environment that explains new teaching strategies, insulates faculty from any moderate risks when trying new approaches, and rewarding those who make attempts.

Valuing, modeling, or championing IPE was the third quality of successful IPE faculty consistently identified in this literature review. Due to the nature of the content of IPE, having the ability to balance and support team communication and team formation are logical qualities exhibited by successful IPE faculty. These qualities are primarily skills that can be built, although faculty must believe in both the value of teams as well as the value of working in teams in order to teach such skills to their students.

The final quality discussed in the literature was functioning as a facilitator. Being a facilitator is a more complex role than providing a lecture or directing a discussion. Facilitators must manage the overall learning environment through preparation, active listening, conflict prevention and management, discussion balancing, and overseeing (Improvement, 2007). Facilitators use a wide variety of skills to motivate productive discussions while working from the periphery. Faculty that function as facilitators are often learner-centric and work to support student-led discussions rather than dominate or lead the discussion. Being a facilitator can be a tough job, requiring comfortableness with ambiguity and a confidence in one's ability to address conflict.

Although the literature appears consistent about what qualities make IPE faculty successful there are still a number of remaining questions: Do students actually value this concise list of qualities? Do they value one quality more than another? Do students of different disciplines value qualities differently? Is each of these qualities actually being

measured as individual and independent factors? A richer understanding of the relationship between students and their IPE faculty would provide a stronger foundation for IPE faculty training and improvement.

Methods

Based on the qualities of exemplary IPE faculty recommended by the literature, a paper and pencil student survey was created to assess student's valuation of these IPE faculty qualities (appendix 3-A). After being reviewed by the UW Human Subjects Division and receiving a determination of exempt status, the survey was distributed to all students enrolled in health professional training programs who were attending a large, public university in the Pacific Northwest and participating in the *Foundations for Interprofessional Practice* series. The Foundation series consists of four 2-hour classes in which students from the schools of dentistry, medicine, nursing, and pharmacy, as well as the physician assistant program, meet as small interprofessional groups and engage in problem-based learning or skills based learning. Each class is designed to teach introductory IPE concepts, such as understanding and respecting roles, through a clinically relevant topic, or vector, such as care of veterans or error disclosure. This structure allows for the students to learn and apply IPE concepts in a manner that is appealing and feels realistic. The Foundation series has been in existence since 2009, when the first class was piloted, and currently is a four-session series. Formal and informal student evaluations have consistently shown high satisfaction.

The survey consisted of two questions to assess student's valuation of the stated IPE faculty qualities. The first question asked respondents to nominate faculty who they felt excelled at IPE; these results were used for a separate research project. The second

question used a 5-point Likert scale (1= not important to 5= extremely important) to rank a list of faculty qualities based on their importance to the student's ability to learn IPE concepts. There was space left to allow students to write in any additional faculty qualities they felt were important; that space was blank on all returned surveys.

Analysis

The data were analyzed using SPSS 18 software. Basic frequency analysis showed that 486 students completed at least some portion of the survey (figure 3-1). Due to the theorized individual nature of each quality and the low percentage of missing data (0.6%-8.4%), it was decided to include all partially completed surveys in the dataset. To fully explore student's perceptions of IPE faculty qualities, four research questions were developed.

1. Do students value this concise list of IPE faculty teaching qualities?
2. Do students value one quality more than another?
3. Do any of the quality scores significantly differ based on students' future professions?
4. Are each of the qualities being measured individual and independent factors?

Each of these research questions required different analysis techniques and therefore will be described below individually.

Value of listed qualities. To answer the first question, a frequency histogram was created (figure 2). The use of a graph allows for simple and understandable information that does not misrepresent the ordinal nature of the data.

Distribution of value to qualities. To address the second research question, a series of paired t-tests were completed to see if there was a statistic difference between

any of the qualities (table 3-3). Because this series of paired t-tests totaled 15 tests, a Bonferroni correction (Dunnett, 1955; Simes, 1986) was performed to appropriately address the elevated type 1 error rate and lower the value of significance (p-value) to 0.003.

Influence of student's future profession on quality's score. To determine the third question, a one-way analysis of variance (ANOVA) was completed to test if students in different professions value qualities statistically differently based on their discipline (table 4). Although there was quite a bit of variation in the group size of each profession (smallest = 29 and largest = 183), the total sample size was large enough to be protective (Glass, Peckham, & Sanders, 1972). In addition, there is no theoretical basis for combining professional groups (each profession is unique) beyond evening out the variation in sample size.

Individual and independent factors. The fourth and final research question is testing the validity of the concepts measured by the survey tool rather than the student responses. This analysis will allow for better understanding of the survey and data, as well as provide information for future use of the tool. To answer this question, a set confirmatory factor analysis was completed with a varimax rotation (figure 3-3). This was chosen because the survey tool was theoretically designed to measure six separate qualities that were not theoretically correlated.

Results

In mirror image of the analysis section; each of the four research questions will be discussed individually.

Value of listed qualities. The data suggests that yes; students do value this concise list of IPE faculty teaching qualities. The frequency histogram illustrated that students put equal weight on the concise list of six IPE qualities theoretically suggested to be necessary for successful IPE teaching (figure 3-2). Between 81 and 87% of students' responses to all six qualities were a 4 or 5, indicating that students viewed each quality as moderate or extremely important to their general IPE learning.

Distribution of value to qualities. The analysis answered the second question, do students value one quality more than another (table 3-3), by showing that, other than the quality of "models interprofessional skills," the students did not value one quality more than another. The paired t-tests revealed no statistically significant differences between the scores of faculty qualities "able to adapt learning activities when needed", "facilitates rather than leads discussions", "encourages all voices to be heard during group discussions", and "shares relevant clinical experiences". The quality "models interprofessional skills", the only faculty quality to have statistically significant results, differed from four out of five other qualities (table 3-3). This indicates that student valuing of "models interprofessional skill" quality is different than the other qualities.

Influence of student's future profession on quality's score. The one-way ANOVA demonstrated no significant difference in students' responses based on profession (table 3-4). Therefore, the answer to the third research question was no—none of the IPE faculty teaching qualities' scores significantly differed based on the students' future professions.

Individual and independent factors. The confirmatory factor analysis, completed to answer the fourth research question, suggest that the six IPE qualities

measured are not discrete and independent factors. Therefore, the six IPE faculty teaching qualities being measured by the survey tool were not individual and independent factors. The confirmatory factor analysis instead suggests that there are two factors being measured (figure 3-3).

Discussion

The results of the analyses demonstrated some interesting discussion points. First, the profession demographic of the sample was representative of the average enrollment of students in each health science profession, included in the foundation series (figure 3-2). This provides confidence that the data is representative of the professions and students sampled. Choosing to not collect additional demographic data was done because it is not the norm in IPE research. In addition, during the tool creation phase, collecting additional demographic data was felt not valuable enough to justify the participant burden. The response rate for the survey was estimated to be between 85-89%. This estimation is based on total number of students expected to attend the *Foundation* series (exact attendance was not taken).

Value of listed qualities. Over 80% of students' responded that each of the six qualities on the survey were moderate or extremely important to their general IPE learning. These data reinforce the literature review and strengthen the argument that the qualities exhibited by faculty do impact students' IPE learning. Also, the results highlight that the six qualities included on the survey are a good fit with IPE.

Distribution of value to qualities. The results of the second question, do students value one quality more than another, demonstrated that the students value five of the faculty qualities equally. The sixth quality, "models interprofessional skill", was valued

differently than the other qualities by the students. This finding matches the literature, which often discusses and theorizes the value of modeling in IPE (K. Ho et al., 2008).

Influence of student's future profession on quality's score. None of the scores of the IPE faculty teaching qualities significantly differed based on the students' future professions (table 3-4). This knowledge is valuable to the IPE community for two reasons. First, it suggests that students from various professions undergo IPE learning in similar ways. This is extremely important to know because it reinforces that impactful IPE instruction does not need to be tailored to each student. Next this knowledge tells us that exemplary IPE faculty can be of any health science profession. The success of an IPE faculty depends more on the teaching qualities they exhibit then the profession they are trained in and represent. This is valuable to know for faculty recruitment and development.

Individual and independent factors. The confirmatory factor analysis suggests that there are two factors being measured with the survey tool rather then six (each of the IPE faculty teaching qualities as the survey tool is designed).

Therefore, the six IPE faculty teaching qualities being measured the survey tool are not individual and independent factors. This is not surprising since theoretically all of the qualities are components of a single complex concept: quality IPE faculty teaching. In addition, the survey tool may not be sensitive enough to reveal independent components as each was measured with only one item per quality.

Limitations

This study had several limitations. First, it lacked a formal pilot study. A small, informal focus group of graduate students completed the survey to evaluate the tool's

verbal directions, but not to evaluate the survey itself. The survey tool produced data with minimal variation and data were right-skewed. A pilot study of the survey tool may have allowed an adjustment of the Likert scale in order to capture more variation. However, the overall sample size was large, which provides natural protection against statistical violations.

A second limitation was that all data were ordinal using a 5-point Likert scale. Ordinal data limit what can be stated about the results of a survey because participants determine what each Likert category means to them as well as what the difference between categories means. For example, the difference between important and moderately important may not be linear. However, ordinal data are commonplace in IPE, educational, and healthcare research, and are familiar to research participants.

Last, this research has limited generalizability. Although the sample size is large and representative of numerous health science professional training programs, it was geographically limited to the Pacific Northwest region of the United States. Cultural differences, both societal and healthcare, may have influenced student and faculty's perception and learning of IPE. However, the faculty qualities were based on a comprehensive literature review that represented 12 different IPE programs or research teams across the United States. Buring (2009) included a table of ideal attributes and characteristics of successful IPE faculty from this work that supports the results of this research. Together the current literature and this research begin building a foundation of knowledge about IPE faculty. This diversity in research and geography strengthens the suggestion that the six faculty IPE qualities are universal, but further research with additional diverse student populations is needed.

Conclusion

Overall, this study reinforces our understanding about what makes IPE faculty successful by providing evidence from the students' perspectives to confirm theoretical perspectives gleaned from a current literature review. Students highly valued all six qualities identified in the IPE literature as significant for being a successful IPE faculty and did not demonstrate a preference or bias toward any particular quality based on their degree program. This lack of preference across five different health professions supports the argument that future health professional students can be educated together in a similar manner by similar faculty.

All students identified modeling of interprofessional skills as different in importance than the other IPE qualities for faculty. This finding calls for further investigation. Is there something unique and powerful about modeling IPE that is critical for effective student learning? If so what does effective IPE modeling entail? Additional knowledge is needed to understand the relationship between IPE and modeling. Further exploration of differences in the importance of the six qualities for IPE teaching may be facilitated by expanding a survey to have multiple items to measure each quality.

This study allowed for additional insight into the relationship between student and the IPE instructor. With further development this increased understanding can be used to prepare and improve the training and practice of IPE instructors and ultimately the learning of IPE. This study provides evidence that IPE faculty need to develop these six key teaching qualities, with an increased emphasis on modeling, in order to become exemplary IPE faculty. Focusing faculty development on this important area will help strengthen IPE and begin to address at least one challenge faced by the IPE community.

Tables and Figures

Table 3-1: Faculty Interprofessional Education Teaching Qualities

Faculty Qualities	Articles
Function as a facilitator	(Buring, 2009) (Hall & Zierler, 2014) (Shraiky, 2013) (Ruiz, Ezer, & Purden, 2013) (Oandasan & Reeves, 2005)
Willingness to try new teaching strategies	(O'Neill & Wyness, 2005) (Forte & Fowler, 2009) (Buring, 2009)
Value, model, and/or champion IPE	(K. Ho, Jarvis-Selinger, S., Borduas, F., Frank, B., Hall, P., Handfield-Jones, R., Hardwick, D.F., Lockyer, J., Sinclair, D., Lauscher, H.N., Ferdinands, L., MacLeod, A., Robitaille, M., & Rouleau, M., 2008; K. Ho et al., 2008) (Buring, 2009) (K. Ho, Jarvis-Selinger, S., Borduas, F., Frank, B., Hall, P., Handfield-Jones, R., Hardwick, D.F., Lockyer, J., Sinclair, D., Lauscher, H.N., Ferdinands, L., MacLeod, A., Robitaille, M., & Rouleau, M., 2008)
Ability to balance and support team communication and team formation	(Oandasan & Reeves, 2005) (Ruiz et al., 2013) (Forte & Fowler, 2009) (K. Ho, Jarvis-Selinger, S., Borduas, F., Frank, B., Hall, P., Handfield-Jones, R., Hardwick, D.F., Lockyer, J., Sinclair, D., Lauscher, H.N., Ferdinands, L., MacLeod, A., Robitaille, M., & Rouleau, M., 2008)

Derived from Literature Review

Table 3-2: Ideal Attributes and Characteristics of Interprofessional Faculty

- Group facilitation experience
- Team teaching experience
- Pragmatic expectations of interprofessional learning
- Skilled in helping groups through conflict
- Expertise in the competencies needed for practice in the setting
- Capable of helping learners connect theory to practice
- Practiced in helping student overcome miscommunication that may arise from different professions' perspectives
- At ease with the technology and learning methods being used (e.g. problem based learning, active learning)
- Accomplished in developing targeted assessments and providing specific and sensitive feedback
- Engages in critical reflection on interprofessional teaching and implements changes in the process

(Oandasan & Reeves, 2005)

Table 3-3: Comparison of IPE Faculty Teaching Qualities Scores by Scores of Other IPE Faculty Teaching Qualities

	#1: Able to adapt learning activities when needed		#2: Role models interprofessional skills		#3: Facilitates rather then lead discussions		#4: Encourages all voices to be heard during group discussions		#5: Shares relevant clinical experiences		#6: Provides helpful feedback during discussions	
Quality	***t***	***p***	***t***	***p***	***t***	***p***	***t***	***p***	***t***	***p***	***t***	***p***
#1: Able to adapt learning activities when needed	-	-	-4.34	0.00*	-0.66	0.51	-1.01	0.31	-0.10	0.92	0.57	0.57
#2: Role models interprofessional skills	-	-	-	-	3.35	0.00*	2.80	0.01	3.35	0.00*	4.35	0.00*
#3: Facilitates rather then lead discussions	-	-	-	-	-	-	-0.29	0.77	0.30	0.77	1.02	0.31
#4: Encourages all voices to be heard during group discussions	-	-	-	-	-	-	-	-	0.68	0.50	1.26	0.21
#5: Shares relevant clinical experiences	-	-	-	-	-	-	-	-	-	-	0.89	0.38

Table 3-4: Comparison of IPE Faculty Teaching Qualities Scores based on Student's Future Profession

Quality	***F***	***p***
#1: Able to adapt learning activities when needed	0.23	0.92
#2: Role models interprofessional skills	1.00	0.41
#3: Facilitates rather then lead discussions	0.51	0.73
#4: Encourages all voices to be heard during group discussions	1.43	0.22
#5: Shares relevant clinical experiences	1.613	0.17
#6: Provides helpful feedback during discussions	1.062	0.38

Figure 3-1: Student's Future Profession (n = 486)

Future Profession	*n*
Dentistry	69
Medicine	183
Nursing	122
Pharmacy	80
Physician assistant	29
Not reported	3

Figure 3-2: Students' Response to IPE Faculty Teaching Qualities

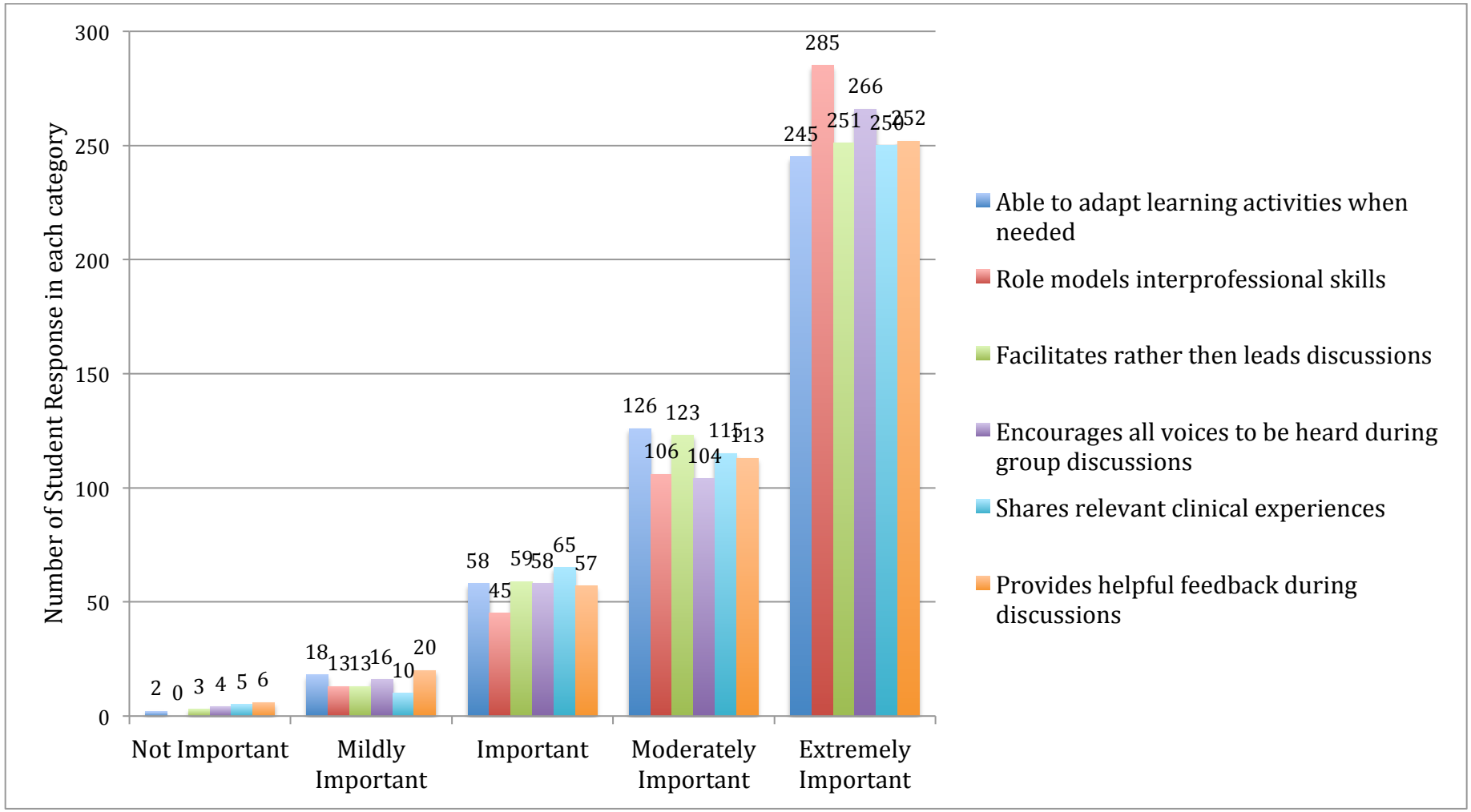
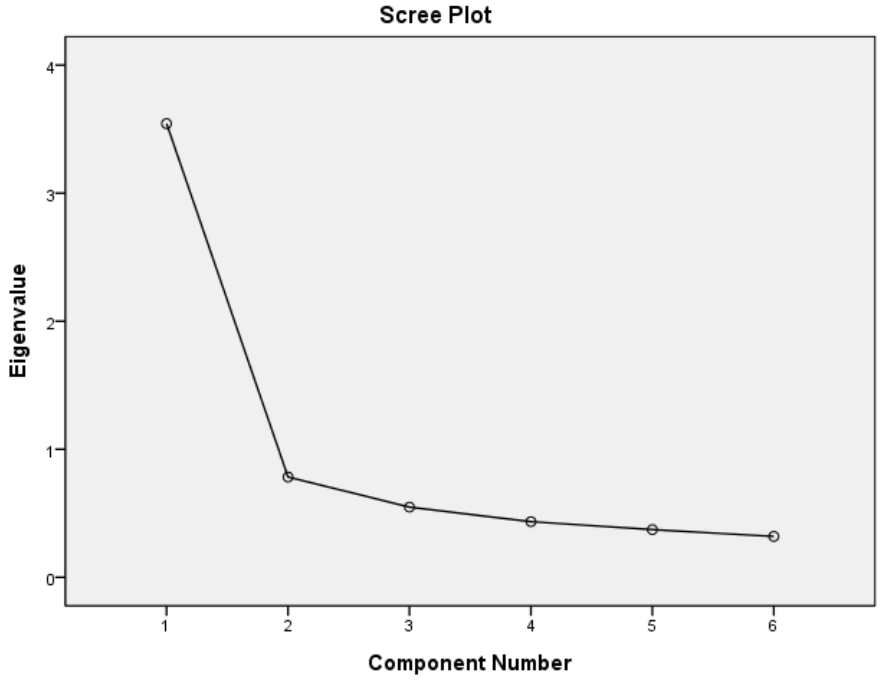


Figure 3-3: Confirmatory Factor Analysis of the Student Survey: *Faculty Interprofessional Teaching Skills*



Appendix 3-A

STUDENT SURVEY: ***Faculty Interprofessional Teaching Skills***

April 2015

Indicate the profession for which you are training:

☐ Dentistry (DDS) ☐ Nursing (ABSN/BSN) ☐ Physician Assistant (PA)
☐ Dietetics (RD) ☐ Pharmacy (PharmD) ☐ Social work (BSW)
☐ Medicine (MD) ☐ Other_____

Number of IPE events you attended 2014-2015 school year:

☐ 4 (all of them) ☐ 3 ☐ 2 ☐ 1

Thank you for participating in this year's Foundation for Interprofessional Practice Series. Your feedback is very important to us. We are interested in learning more about what makes interprofessional education successful for you.

1) **Please nominate 1-2 faculty members <u>who excel at IPE from your experience.</u>**
   This might be:
   - Someone from your own school
   - A clinical faculty member
   - Faculty you met through the IPE series

   ○ _____

2) **Please rank the importance of the faculty quality on your general interprofessional learning:**
   Think about what helps you as a student learn; does not need to be specific to any one faculty member

Faculty qualities	**Level of importance on your learning:**				
	Not	**Somewhat**	**Important**	**Moderately**	**Extremely**
Able to adapt learning activities when needed					
Role models interprofessional skills (Such as respect, ethics, and teamwork)					
Facilitates rather then leads discussions					
Encourages all voices to be heard during group discussions					
Shares relevant clinical experiences					
Provides helpful feedback during discussions					
Other (please state)					

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Chapter Four – Becoming an interprofessional educator: Insights from exemplary faculty

Background

Interprofessional education (IPE), an emerging priority in healthcare education, "occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes" (WHO, 2010). According to a 2010 concept analysis of IPE descriptors (Olenick, Allen, & Smego, 2010), IPE learning experiences consist of two main aims: (a) to teach content and skills necessary for interprofessional practice (IPP); and (b) to provide opportunity for students to interact with students of other professions. Allowing time and space for interaction is a key component of IPE, since it is during these interactions that students modify and gain invaluable attitudes and behaviors about each other's professions and the value of IPP.

Due to the unique nature of IPE, the healthcare education community has struggled with successful implementation (Baldwin, 2007; Lagunas, 2014b). One of the struggles focuses on faculty skills with this new teaching methodology. Faculty are often asked to teach IPE with minimal training or support. Although not a unique situation in healthcare education where faculty often learn to teach through clinical experience rather than formal education or training, IPE is different because of its heavy focus on interpersonal skills. Often the interpersonal skills critical for IPE were not taught or role-modeled during faculty's own educational preparation and are not routinely practiced in their clinical settings. Hence if faculty are expected to teach from clinical experience, they are at a disadvantage when attempting to teach the skills, attitudes, and behaviors vital to IPE. Faculty are often just as much a student of IPE as their students. However,

some faculty still perform well and succeed at IPE. The ability for some to excel regardless of the challenges poses the question: what is unique about faculty who are exemplary at IPE?

Purpose and Significance of the Study

The purpose of this study was to investigate the question, "What is unique about faculty who excel at IPE?" Understanding what makes faculty successful in this new teaching priority will be valuable for guiding faculty development and ultimately improving IPE. While IPE is a current trend in healthcare education, it is also a priority for healthcare delivery, quality, and safety. IPE is the foundational building block for healthcare students as they learn and form IPP, also known as collaborative practice (WHO, 2010). Preparing students to function in healthcare teams can improve patient outcomes (Zwarenetien, Reeves, & Perrier, 2004) and transform the overall healthcare culture.

Methods

Research design and sample. This project draws upon Positive Deviance, a research methodology that focuses on identifying and understanding the positive solutions already being used by a community or population (Pascale et al., 2010). Two key features of the PD approach are the involvement of the community and the attitude of the researcher to research *with* rather than *on* the community by minimizing the researcher's role to that of a *guide* instead of an *expert*. These features are key because they highlight the belief that communities possess the solutions and expertise to address their own problems. PD is a very fluid methodology, allowing the researcher to make personal choices about project execution. However, all PD research includes three

universal steps (1) identify the positive deviants: who in the community should we study?, (2) discover what makes them successful: study the positive deviants using the most appropriate data collection process for that particular problem and community, and (3) share the results with the community: allow the community to learn about and intervene with their problem by sharing the results of the research.

For this study, PD provided the framework and theoretical orientation for the study design. PD was particularly influential during the decision-making regarding sample recruitment and the development of the interview guide. Positive deviants, a unique component of PD, are the community members who are routinely conquering the problem even though they have the same resources and barriers as the rest of the community (Pascale et al., 2010). The sample pool of a PD project is composed of positive deviants. For this project the positive deviants were IPE faculty who were viewed as excelling in the field. To identify the study's sample pool, the researcher chose to use the students' perspective by using students to identify positive deviants. If one wants to understand how or what makes an instructor excel at IPE, it makes sense that the student's perspective would be valuable. The student perspective was gathered through the use of a two-part survey. Over 450 health science students who had participated in IPE were asked to name 1-2 faculty members that they felt excelled at being IPE instructors. Students were encouraged to think of someone from their school, clinical faculty members, or those they met through a required IPE series of four seminar sessions. No rationale for their choice was requested. This process generated a master list of 146 nominations. Twenty-seven of the faculty nominations were removed due to either insufficient information given for identification (i.e. poor handwriting or the use of

nicknames) or personal involvement in the research study (i.e., members of the dissertation supervisory committee). The resulting 119 faculty members were then divided up by profession and ranked based on number of nominations. The top three individuals in nomination frequencies (ranging from 3-15 nominations) from each of the represented professions or programs (i.e.g, nursing, medicine, pharmacy, dentistry and physician assistant) were approached for participation in this research project. Of the 15 faculty members approached, eight faculty members consented to participate. Reasons for refusal included lack of time, on leave from the university, and failure to respond to research communication.

Interview instrument. An interview instrument was created to standardize and guide data collection (appendix 4-A). The interview instrument was based on the findings of a literature review exploring current knowledge of IPE teaching strategies (Lagunas, 2014a). This review generated a list of both faculty qualities and teaching strategies that could be considered key to IPE faculty success (table 4-1). This list of faculty qualities and teaching strategies evolved into a basic framework used for analysis.

Data collection and analysis. The goal of the interviews was to create an open dialogue with faculty to allow self-reflection on why faculty believed they were nominated by their students as exemplary IPE educators, and therefore what made them "excel at IPE". The interviews were conducted in a private location on university property at the discretion of the participant and lasted between 15-39 minutes (average = 21 minutes). As the interviews unfolded, the researcher began to notice a second theme emerging that she termed *the development of IPE faculty*. This led to the decision to

analyze the qualitative data in two ways in order to address the original research question and to explore this new emerging theme.

Analysis of the data used a directed content process (Hsieh & Shannon, 2005). Directed content analysis is a process in which a coding scheme is created prior to data collection based on prior theoretical knowledge and research findings about the subject (Coombs, Tang, & Long-Sutehall, 2016). The basic framework, developed from the list of faculty qualities and teaching strategies from the literature, was used to guide the analysis of the data (table 4-1) in order to confirm, expand, or refine the literature. The deductive qualitative analysis procedure is summarized in table 4-2 and had two distinct phases. The first phase of data analysis involved coding data using the initial coding scheme and expanding and refining the themes and subthemes. The second phase involved analyzing themes across participants to understand patterns among participants and themes.

Data analysis for the emerging lifespan theme used a more organic, inductive approach in which the investigator assigned each participant a *developmental stage of the IPE faculty* based on his or her interview. Analysis then continued and similarities and differences between these tentatively assigned stages were analyzed.

Ethics. All study procedures and instruments were reviewed by the University of Washington Human Subjects Division and determined to have exempt status. No student identifiers were obtained on the student survey and the use of the PD methodology generated minimal potential risks for participating faculty.

Findings

Description of sample. The sample consisted of eight faculty members from a large, urban, research-intensive university in the Pacific Northwest. All faculty members were affiliated with at least one of the health sciences schools or programs within this university. Four participants were female, and each of the five health science professions were represented, with medicine, nursing, and pharmacy each having two faculty members in the sample (table 4-3). The professional qualities of the faculty members were diverse; some primarily functioned in administration, didactic education, or clinical instruction roles, while a few performed a mixture of roles. There was also a significant range (1-20+ years) in the number of years each faculty member had been in their current role. Two of the participants did not teach in the IPE required foundation series of four seminars, suggesting that students may have a broader view of IPE and identified faculty across their learning venues when considering who to nominate as an exemplary IPE educator.

Overview of qualitative results. Three key areas of findings emerged in the data analysis. The participants described individual qualities they believed were important for faculty to possess to successfully teach interprofessional students. They also described practices they had found helpful to use in setting up learning environments. While many of these confirmed the themes from the literature and prior research, these participants expanded and refined these basic codes to provide a richer understanding of faculty qualities and teaching strategies. Second, a pattern began to emerge of growth as an IPE educator. Participants reflected on their own growth and different participants illustrated the different stages of IPE teaching excellence. Third, the participants described three core, shared principals around being an interprofessional educator. These principals

extended across both the qualities of and teaching strategies used by exemplary IPE teachers. The process of becoming an exemplary interprofessional educator encompassed an embodiment of these values. Each of the themes, stages of growth and core principals are discussed below.

Themes of excellence in exemplary IPE faculty. Interviews with faculty who had been identified by their students as exemplary at teaching interprofessionally identified five core, shared individual qualities. Table 4 summarizes these five themes and their subthemes. Frequencies of themes and subthemes are included but are not intended as an indicator of value but rather to show commonality and agreement between the various participants. Data from participants were used to refine the original codes and to develop sub-themes.

What individual qualities do exemplary IPE faculty share? The five refined themes illustrating key, individual qualities of exemplary IPE faculty included humility around one's own clinical experiences, positive core beliefs about IPE, prior IPE experiences, personal motivation for IPE and self-reflection around their own teaching. Each theme had 4-7 subthemes that illustrated and further expanded how these faculty put into practice these core qualities. Each theme and its subthemes will be discussed below.

Humility around own clinical experience. All participating faculty mentioned clinical experience as in important component of what they brought to their teaching. Their personal experience and understanding of the clinical environment provided them with meaningful material to use in the classroom often as examples. Further discussion, revealed two specific ways the faculty used clinical experience as examples in the

classroom. They shared (a) negative personal experiences where they had learned valuable clinical lessons and, (b) positive experiences with interprofessional practice.

Positive core beliefs about IPE. While all participating faculty expressed a core belief in the importance of interprofessional practice there were several specific values about IPE expressed. All faculty expressed that they saw the value of healthcare teams, often linking this with an example from their clinical practice. A majority of them included the patient and/or family explicitly as a vital member of the healthcare team. Value of IPE, respect for all team members, and commitment to IPE were also mentioned.

Prior IPE experience. Participating faculty's experiences with IPE varied; the majority (7 out of 8) of the participating faculty had previous teaching and/or observing experiences with IPE. These previous IPE experiences occurred in a number of settings including the IPE required foundation series of seminars. When asked about their previous IPE experience, two faculty members also mentioned their experience with interprofessional practice in their own clinical practice.

Personal motivation for IPE. Every participating faculty expressed personal, often intrinsic, motivation for teaching and/or valuing IPE. All stated a belief that IPE improved students' outcomes either during their professional education or during their clinical practice after they have completed their education. A desire to improve patient care or support the evolution of healthcare was also discussed by faculty as personal motivation to teaching IPE. Faculty also mentioned how teaching IPE provided them with educator or professional fulfillment. Educator fulfillment was described as one's enjoyment or positive gain from teaching IPE (i.e., *I like teaching IPE* or *I am good at teaching IPE*). Professional fulfillment referred to IPE adding benefit to one's own

profession (i.e. *Teaching IPE improves my nursing profession*). All faculty had at least two personal motivations for IPE and this was a topic discussed by the faculty extensively during the interviews.

Practices self-reflection around their own teaching. When asked why their students nominated them as exemplary IPE educators, 5 of the 8 participating faculty stated they did not know. However through further discussion all of the faculty opened up and speculated over why their teaching was viewed positively by their students. All of the faculty mentioned their use of student-centric practices in the classroom with a couple faculty including their respect for students and value of communication as important in their teaching. Only one faculty spoke of their formal training as being key to their success as an IPE educator while all 8 faculty credited informal training as being influential.

What teaching strategies do exemplary faculty employ? An additional four themes, each with 1 to 6 subthemes, were identified that highlighted valuable teaching strategies displayed by exemplary IPE faculty. They included focusing on facilitation, providing feedback, using active learning strategies, and incorporating role modeling. Each theme and its subthemes will be discussed below.

Focuses on facilitation as key teaching skill. In education, facilitation is a teaching style in which the teacher guides and supports the student activity or conversation rather then dominates or directs. Facilitation can be considered a student-centric teaching strategy. The entire participating faculty mentioned facilitation in some manner. Some discussed the importance of facilitation or how they intentionally use it in their teaching. Others talked about using facilitation to support student-centric discussions and, simultaneously, the need to help balance students' voices in a discussion to allow for equal

student participation. Last, it was mentioned that faculty flexibility was key when facilitating a class. These participants discussed the need to be able to adjust and "think on one's feet" to allow the students contribution to a learning event to impact the potential agenda and focus of the IPE session.

Makes a habit of providing feedback. Two faculty members mentioned providing feedback to students during IPE sessions as a critical teaching strategy. One faculty member discussed using positive feedback constructively to reinforce key lessons of collaboration and team-based practice. Another talked about using routine feedback during the IPE sessions and the high value students placed on feedback.

Uses active learning strategies. All faculty mentioned at least one active learning strategies they used in an IPE classroom. Student discussion was the most frequently mentioned strategy with faculty talking about discussion in general, structured small group discussion, and case discussions as useful strategies. Shared clinical activities were also highlighted as useful. Faculty spoke of the need to be flexible and open to using different active learning strategies and how the best learning strategies are student-centric.

Incorporates role modeling. Role modeling has been theorized as an important part of IPE instruction, hence each faculty member was asked to discuss their thoughts on role modeling in the IPE classroom. All faculty members agreed that role modeling was important; one faculty agreed by stating "and my sense is that its an attitude that one brings to the endeavor, people will feel more included, and it'll be more of a mutual interaction. So I think it helps process". Faculty expressed a desire to role model positive attributes of IPE. Faculty explained that they strived to role model attributes such as respect and acceptance by listening, validating, and having an open mind. One faculty

was quoted saying "I am being a role model with the flaws and the pluses that that will bring". Five of the participating faculty members mentioned that they intentionally used role modeling in their classrooms as a teaching strategy. Their intentionally is to use themselves as real life examples of the messages they want students to receive. For example, one faculty member stated "I feel like I have been a little bit conscious of that and for me I want to show that nurses can become leaders and that were a place where we're making decisions and involved in a very high level of decision making, planning, and leading the organization, but I also want a role model that I'm still clinically relevant".

Becoming an interprofessional educator. The faculty participants in this study illustrated a process of self growth: becoming aware of the importance of IPE, becoming aware of the different focus, becoming skilled at new teaching strategies, and becoming comfortable with different learning situations. For example, when asked about why they value IPE, a few instructors stated that it improved their profession while others discussed the positive impact of IPE for patients and/or healthcare systems. These findings were further analyzed to develop a model to represent the process of becoming as IPE educator as demonstrated by the participants in this study. Based on the similarities and differences shared by the participants, a second analysis was done on the interview data with the intention of revealing and organizing these differences. A reiterative inductive process was used to analyze and describe these findings on a continuum. (See figure 4-1 for developmental model and figure 4-2 for summary of stages.)

The proposed IPE Faculty Development Model begins with a pre-IPE stage termed the traditional educator. This stage was an important component of the model because it served as a reminder that teaching IPE was different than teaching clinical or

classroom didactics and that being an exemplary educator did not necessarily translate directly into being an expert IPE educator. This stage also served as a reminder that not all faculty are IPE educators.

The next stage, the first stage of IPE faculty development, was the role of the IPE observer. Faculty in this stage were interested in IPE and began to explore the role of the IPE educator. They discussed observing other faculty teaching IPE or participating in an IPE session, but are only in sessions with clinical topics they were very familiar with. They also began to see that interprofessional pedagogy typically was constructed with a dual curriculum: a clinical topic paired with an IPE concept. Faculty at this stage on the IPE educator continuum described a passive awareness of the dual curriculum but lacked insight into how to teach both concepts.

The third stage was the beginner IPE educator. In this stage the IPE observer increased his or her active participation in interprofessional teaching as well as their comfort level with IPE topics and teaching strategies. Faculty illustrated starting to understand that they needed to teach to the IPE concept, not just the clinical topic. Along with this awareness, faculty also began to realize that they did not need to be an expert of all clinical or IPE topics. Instead they began to describe their role as that of facilitator and guide. Faculty in this stage, similar to the previous stage, continue to express the value of IPE primarily from a perspective of how it improved *their own* practice or profession.

Faculty in the fourth stage, the competent IPE educator stage, viewed the clinical topic in an IPE session as a vector to teach IPE concepts. In contrast, to prior stages, a radical shift occurred that expanded the faculty's view of why IPE matters to encompass patient outcomes. In designing an IPE learning session, the faculty might start thinking

about the IPE concept prior to the clinical topic. These instructors were comfortable teaching IPE. They described their role solely in terms of facilitating learning versus teaching content. At this stage, IPE educators also had shifted from seeing themselves as teaching "their" students to teaching teams of health professional students.

The last stage was becoming an expert IPE faculty. These faculty described the value of IPE on a system level, in addition to a personal level, and described being very comfortable with multiple active learning strategies for IPE. When designing IPE experiences, expert IPE faculty focused first on the IPE concept they wanted to teach and then on the clinical content they thought would best convey this concept for effective student learning.

Core Principals of the Interprofessional Educator. Additional analysis of the themes, subthemes and developmental model revealed three principals shared among exemplary IPE faculty: (a) they express a strong focus on their students' learning; (b) they tend to be intrinsically motivated to learn more about teaching pedagogies and to teach; and (c) they express strong "buy-in" for IPE and IPP. These principals were reflected across the qualities and strategies and across the continuum of the developmental model. The principals were expressed by all participants, but to greater or lesser degrees of passion, appearing to reflect their depth of integration into interprofessional educational activities and curriculum.

The first shared, core IPE principal was a focus on student learning. This concept was expressed by all participants, whether implicitly or explicitly. Student-focused learning was represented in a number of the sub-codes including student-centric discussion, use of student-centric pedagogies and practices, respect for students, and

improved student outcomes. Faculty did not just talk about how their teaching practices focused on students but also how their attitudes and beliefs demonstrated their focus on students. The diverse codes reflecting a student focus suggested that faculty who excel at IPE view students as a valuable component of the teaching and learning process.

Faculty that excel at IPE also reported being intrinsically motivated to learn more about teaching pedagogies and to teach. This was supported by the sub-codes that emerged from the themes of motivation for IPE and IPE experience as well as the sub-codes of faculty informal education and self-reflection on IPE practices. Only one of the study participants had received formal IPE training, yet all spoke of ways they had sought out informal training and/or personal mentorship in IPE. They reinforced that they were involved in IPE because they believed it improved patient care and student outcomes and because it provided them with fulfillment as an educator and/or professional.

Finally, a third core principal shared by these instructors who excel at IPE was that they exhibited a belief or buy-in to the idea and value of IPE; they were teaching not only something that made them feel good about themselves and the craft of teaching, but also something they believed in the value of professionally. Similar to a value around evidence-based practice, or ethical care, these participants described interprofessional practice as having critical value to patients and the healthcare system as a whole. It was simply the "right" thing to do.

Discussion

The primary aim of this study was to better understand what individual qualities or teaching strategies are shared amongst faculty who are perceived as exemplary at

interprofessional education from students' perspectives. The results of this study confirmed the general categories identified in a recent literature around important individual qualities and teaching strategies for IPE faculty. More importantly, these findings deepen and enrich our understanding of those general categories.

Each category, individual qualities and teaching strategies, contained specific themes that highlight valuable knowledge about exemplary IPE faculty. Two themes were particularly noteworthy; humility around own clinical experiences and facilitation as key teaching skill. While the use of clinical expertise, often in the form of example or story sharing, is common in healthcare education; exemplary IPE faculty discussed how they share negative personal clinical experiences and positive team care experiences. This is a shift away from the more common glamorous "hero" stories healthcare educators often share with students. Perhaps by being aware of their own clinical humility, exemplary IPE faculty are able to have improved connection with students. Sharing negative personal stories may make students more comfortable with their own stage of learning. Alternatively, disclosure of personal fallibility may allow more open discussion among learners and between faculty and students. Similarly, presenting positive examples of team-based care may help students to see, or believe, that interprofessional, collaborative care exists and is accepted. Faculty examples may help students to recognize examples that they have experienced in their own learning.

Facilitation, a theme of teaching strategies, is noteworthy because it provides a subtle difference then commonly discussed student centric teaching strategies. Using facilitation in an IPE classroom requires that the faculty not only allows the students to develop the conversion but also requires they balance the voices of a diverse student

group. Balancing student voices when teaching interprofessional students was a key part of these faculty's comments on facilitation. Faculty also reflected on the impromptu nature of IPE student discussions and the need to be responsive to student comments. Facilitation of IPE requires faculty who are prepared to create and execute curricula that allows for equal participation of diverse professions. This knowledge combined based with the three core principals of exemplary IPE faculty lay a strong foundation for understanding IPE faculty.

Additional important finding from this study was the developmental process for becoming an expert interprofessional educator. The IPE Faculty Developmental model revealed that IPE faculty evolve from traditional educators to IPE experts by becoming aware of IPE and the importance of IPP, shifting the focus of their curriculum from clinical content to IPE topics, embracing new teaching strategies, and becoming comfortable with different learning situations. Similar to Benner's Stages of Clinical Competence (Benner, 1984), IPE faculty developed through skill acquisition as well as a shift in values. Benner found that in moving from novice to expert as a clinician, nurses shifted their focus from the nurse to the patient in a subtle yet critical way. As nurses became more experienced, the nurse's role in a clinical situation began to recede in the story while the patient's story moved into the limelight. IPE faculty expanded their view of the value of IPE from how it positively impacted their own practice and profession to how it impacted patient care and the whole healthcare community as they developed into expert IPE educators. They saw IPE as valuing not only their own profession's students or their own personal teaching satisfaction, but benefiting the entire student healthcare team and, ultimately, patient outcomes.

In addition, these findings suggest that as IPE faculty develop, they transition from simply acknowledging the dual curriculum of IPE to designing IPE sessions with the IPE concept foremost and using the clinical content as the vector whereby students engage with the IPE concept. Perhaps the last shift in the developmental process was embracing new teaching strategies; such as intentional role modeling, facilitating student led discussions, balancing student's voices, and providing pertinent feedback. This is an important finding. It suggests that early faculty development efforts around IPE aimed at introducing active learning strategies may be ineffective without first addressing their understanding of IPE's value and the purpose of the dual curriculum.

A final key finding of this study was the three core, shared principals of exemplary IPE educators. This finding is important to guide future investment in IPE faculty development. Investment in faculty development that focuses on simply sharing IPE teaching strategies may be unsuccessful if delivered with understanding of the developmental model of becoming an IPE educator and embodying the three core principals of IPE. Instead, IPE faculty development should address the stage of development of the educator, offer opportunities for observation, allow for dialogue with other educators to reveal the dual curriculum, and then offer the teaching strategies that will assist the interested faculty member to become an expert IPE educator.

Limitations

There were three main limitations in this study. One key limitation was that all interviews were conducted and analyzed by one investigator, creating the opportunity for bias. An interview guide was created prior to the start of data collection and was used with each interview to minimize this risk. In addition, an experienced qualitative

researcher reviewed data and emerging codes to challenge biases and assumptions of the primary investigator. A second limitation was the relatively small sample size and possible geographic or institutional bias of the sample. All faculty were recruited from a single university institution in a single geographic region. It is possible that faculty in other universities or other geographic regions possess different individual qualities or use different teaching strategies as they become skilled at IPE, or that a larger sample would have resulted in somewhat different findings. However, these findings echoed themes from the literature review suggesting that the sample and findings were representative of other interprofessional educators in the United States. The final limitation relates to the proposed faculty development model. This study did not seek to purposively recruit faculty at different stages of proficiency with IPE. It is possible that a study designed to recruit faculty at different stages of experience would reveal somewhat different themes. This study relied in part on participants' memories and reflections on their growth as educators, which may not reflect the actual process.

Implications

The aim of this study was to investigate what is unique about faculty who excel at IPE. Three key, shared principals emerged of exemplary IPE faculty: they express a strong sense of focus on their students, they tend to be intrinsically motivated to learn more about teaching pedagogies and to teach, and they have a strong buy-in for IPE and IPP. How does this translate to the IPE teaching community?

To foster strong IPE faculty, IPE teaching communities may need to support increasing the use of student-centric educational practices. This might mean offering training and resources around different educational methods or incentivizing and

rewarding faculty who use student-centric practices. It also may mean setting up the logistics and topics of IPE sessions to address student needs and interests. Ultimately, IPE teaching communities need to acknowledge the value in student-centric practices and work with instructors to build curricula that reflect this key focus.

The other two principles—faculty tend to be intrinsically motivated to learn and teach and have a strong buy-in for IPE and IPP—can help IPE communities identify faculty who should be invited to teach. The IPE community often needs a large number of educators to execute the curriculum; having an idea of what type of individual would make exemplary IPE faculty can help with recruitment. These principles also suggest that building the community's understanding and buy-in around IPE and IPP may be a method to start increasing the number and quality of faculty. It is also possible that, if learning and teaching are rewarded, thus decreasing the level of intrinsic motivation needed, more faculty may be interested in teaching IPE and excelling at it.

The IPE Faculty Development model has potential as a guide for assessing and evaluating IPE faculty. Understanding the process in which IPE faculty develop would allow for targeted and realistic professional evaluation of IPE faculty. Improved evaluation could positively impact the IPE community's ability to validate faculty's professional contribution in the academic setting. It would also allow for interventions to support and provide development for IPE faculty. This study also provides practical insight into the use of PD as a research methodology. PD worked well for exploring interprofessional education by laying the foundation for constructive open relationships to be developed between the participants, exemplary IPE educators, and the researcher. This appeared to promote honest communication and deeper insights. However,

additional research is needed to confirm and extend these findings. Expanding and diversifying the faculty interview data with additional participants would be valuable for strengthening the IPE Faculty Development model. Additionally, gathering other modes of data such as classroom and clinical observations, peer reviews and student interviews would clarify and enrich IPE faculty development goals.

Overall, this study serves as support that there are individual qualities and teaching strategies that exemplary IPE faculty exhibit. By translating this knowledge into appropriate training and resources, the IPE community can help faculty to become expert interprofessional educators. Investing in IPE faculty is a necessary step for the success of IPE and to improve the care of patients and their families.

Tables and Figures

Table 4-1: Successful Learning Strategies and Qualities of IPE Faculty (Lagunas, 2014a)

Learning Strategies
Case-based or problem-based learning.
Group activities.
Clinical related activities (including simulation, observation, and clinical placement).
Mentoring activities (peer and faculty).
Opportunity for informal socializing.
Qualities
Function as a facilitator.
Willingness to try new teaching strategies.
Value, model, and/or champion IPE.
Ability to balance and support team communication and team formation.

Table 4-2: Stages and Outcomes of Directed Content Analysis Method

Stages in Analysis	Actions	Guiding Questions	Outcomes
#1 General read through	*Verify transcribing *De-identifying the interview material but left link to gender and profession characteristics *Understand the general premise of each interview *First assessment if predetermined coding scheme represents data	*Predetermined coding scheme based on basic framework from literature review	*Decision to continue with predetermined coding scheme *First recognition of second phenomena; *lifespan of IPE faculty*
#2 Coding on individual interview level	*First pass at coding on individual interview level *Identified passages that highlight *Lifespan of IPE faculty*	*Predetermined coding scheme based on basic framework from literature review	*Able to narrow down and refine coding scheme *Confirmed presence of second phenomena; *lifespan of IPE faculty*
#3a Redefining the coding on an aggregate level	*Second pass at coding on an aggregate level		*Common themes among coding categories emerge
#3b Building a model	*Linking common passages to a visualization of the *Lifespan of IPE faculty* phenomena	*Researcher creativity	*Suggests additional research needed to further confirm and/or refine the model

Table is inspired by Coombs et al. (2016)

Table 4-3: Personal and Professional Role Characteristics of Faculty Participants *(n=8)*

Characteristic	*n*
Gender	
Female	4
Male	4
Health science profession	
Dentistry	1
Medicine	2
Nursing	2
Pharmacy	2
Physician assistant	1

Table 4-4: Individual Qualities and Teaching Strategies of Faculty Identified by Students as Exemplary Interprofessional Educators

Domain *Reflective of the literature and goals of research*	**Codes** *Predetermined prior to data collection*	**Sub-Codes** *Evolved from the data during analysis*	**Frequency**
Individual Qualities of Exemplary IPE Faculty	Humility around own clinical experiences		*10*
		Value of clinical experiences	3
		Sharing of negative personal experiences as an example	3
		Personal experience with Interprofessional Practice	4
	Positive core beliefs about IPE		*19*
		Family and patient as team members	3
		Value of healthcare teams	7
		Value of IPE	6
		Respect for all team members	3
		Commitment to IPE	1
	Prior IPE experiences+		*14*
		Experiences with IPE Foundation series	3
		Experiences with other IPE events	6
		Experiences with interprofessional practice	3
		Positive experiences with IPE	2
	Personal motivation for IPE+		*38*
		Improved patient care	7
		Educator fulfillment	9
		Improved student outcomes*	9
		Evolution of healthcare	5
		Professional fulfillment	8
	Practice self-reflection around their own teaching		*45*
		Unaware of why they were nominated	5

		Use of student-centric practices*	13
		Respect for students*	4
		Value of communication skills	8
		Faculty informal education+	12
		Faculty formal education	1
		Self reflection on IPE practice+	2
Teaching Strategies of Exemplary IPE Faculty	Focuses on facilitation as key teaching skill		*11*
		Importance of facilitation	1
		Intentional facilitation	2
		Balancing student voices during IPE event	2
		Student-centric discussions*	5
		Faculty flexibility with facilitation skills	1
	Makes a habit of providing feedback		*2*
		Positive feedback	1
		Routine feedback	1

	Uses active learning strategies	*8*	
		Clinical activities	1
		Discussion	2
		Structured small group discussion	1
		Faculty flexibility with using different activities	1
		Use of student-centric pedagogies*	2
		Case discussions	1
	Incorporates role modeling#	*13*	
		Intentional role modeling	5
		Examples of what they hope to role model	8

* Designates the larger generalization of *high level of focus on their student*
+ Designates the larger generalization of *intrinsically motivated to learn and teach*
# Designates the larger generalization of *strong buy-in for IPE and IPP*

Figure 4-1: Depiction of the Inductive Analysis for IPE Faculty lifespan Model

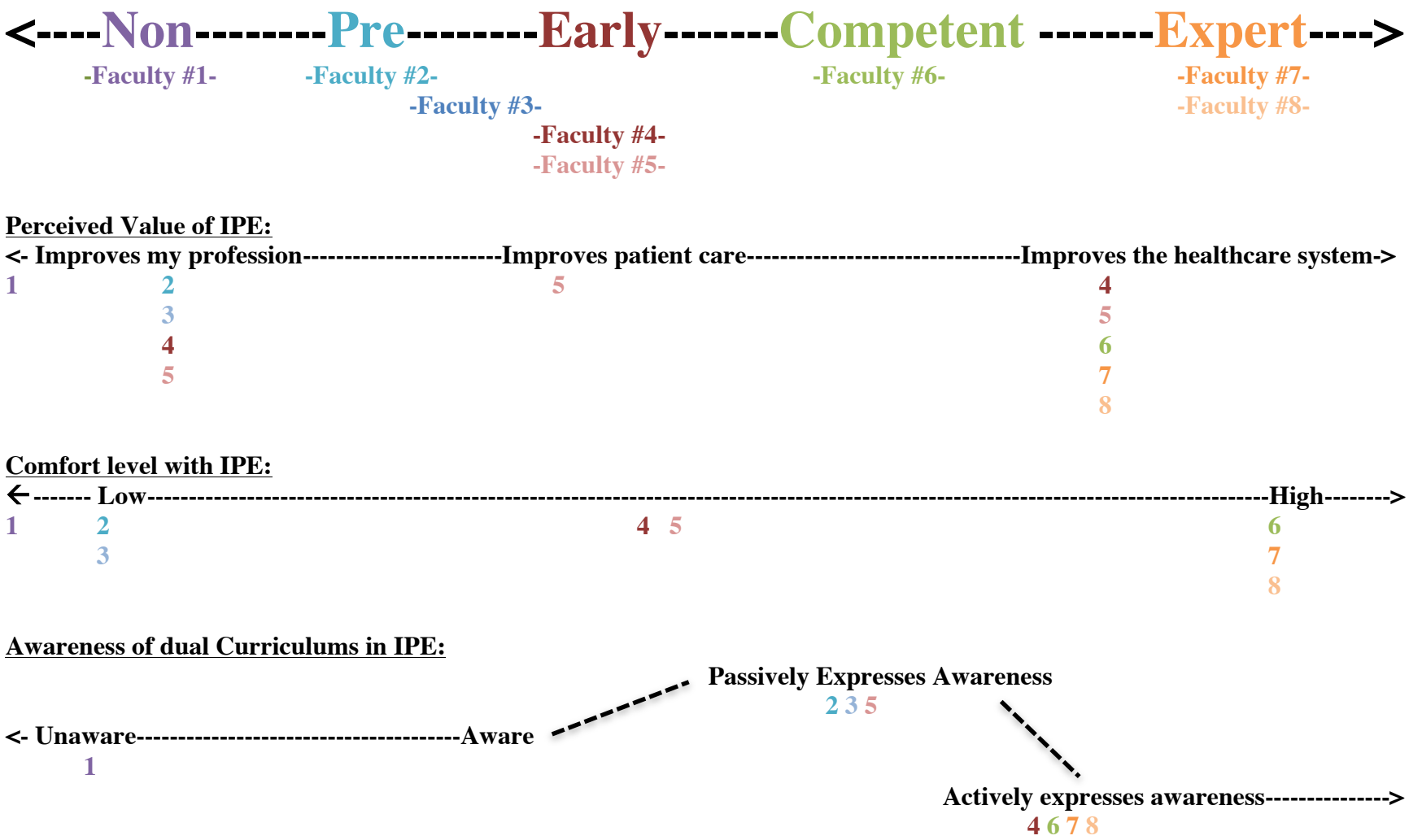

Figure 4-2: Summary: Characteristics of Stages of Becoming an Interprofessional Educator

Traditional Educator-->Observer of IPE-->Beginning IPE Educator-->Competent IPE Educator-->Expert IPE Educator

	Traditional Educator	Observer of IPE	Beginning IPE Educator	Competent IPE Educator	Expert IPE Educator
Perceived Value of IPE					
Improves MY profession		x	x	x	x
Improves patient care				x	x
Improves the healthcare system					x
Comfort level with IPE					
Low		x			
Moderate			x		
High				x	x
Awareness of the dual curriculum used in IPE					
Unaware	x				
Passively exhibits awareness		x	x		
Actively exhibits awareness			x	x	x

Appendix 4-A: Interview Guide

Initial Interview: Getting to know you

Participant number:_____

**Goal of this interview is to learn about the faculty's motivation, views, and philosophy surrounding teaching IPE*

Possible probes to be used to further the conversation:
-Provide me with an example of…
-Tell me more about….
-How did you come to this belief/viewpoint/practice…

1) You were nominated by a group of UW health science students as a faculty member who excels at teaching interprofessional education. Why do you think you were nominated?

2) Tell me about the various experiences you have had teaching IPE

Possible probing questions:
Give me an example of an IPE course you have taught.
-What kind of content was taught?
-How many students and which disciplines were represented?
-Where was the course taught (clinical vs classroom)?

A commonly used definition for IPE is *"2 or more disciplines learning with about, and from each other"*---when have you seen this in a course/classroom/practice?

3) What motivates you to participate in various IPE efforts?

4) How is teaching IPE different than teaching students from just one profession?

Teaching is often a skill one learns by doing. How did you learn how

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Chapter Five: Conclusion

Lessons learned

It is not until the end that one usually pauses and reflects back on how they have come to the end. I started this dissertation work with the mission to learn more about the amazing educators who teach IPE. I aspired to expand the knowledge about IPE educators in hopes to support them in their mission to implement, promote, and execute effective IPE programs with the ultimate goal of improving healthcare, one competent student at a time. Looking back, this may have been more of a career goal than a dissertation. In addition to learning and applying research skills, I learned that a dissertation is actually not a final project but rather the beginning. While my dissertation signals the end of my days as a student, it heralds the start of my work as a scholar, educator, and scientist.

It has been rewarding that my dissertation work reflects a collection of skills I have practiced and provides a foundation for future scholarship. Each manuscript has provided a unique point of view and body of knowledge that will be shared and further explored. The first manuscript (chapter 2) has opened my mind to the concepts of positive organizational scholarship (POS) and the often-untapped potential of viewing communities and problems with positivity. POS and positive deviance (PD) are powerful research tools that not only lead to innovative results, but also allow the researcher to convey respect. It is that key quality -- conveying respect -- that endears me most to using PD with the IPE community. How can I talk about and study a topic that requires respect for all team members without conveying respect? As I grow as a researcher and academic,

I challenge myself to always practice what I preach. POS has offered me tools to conduct scholarship while embracing those values and beliefs.

The second manuscript (chapter 3) gave voice to the student's values about IPE faculty. It is common to read IPE research that discusses students' learning outcomes and experiences but exploring the student's experiences with faculty remains uncommon. This unique perspective provided additional confirmatory evidence for findings in the current literature. More importantly, it provided insight into the interaction between student and educator in the IPE arena. As the researcher, I anticipated to find this data to be a dull but necessary step to get to my goal; the identification of a potential subject pool to recruit exemplary IPE faculty. However, I was wrong. This data was insightful and a joy to analyze. I saw firsthand that, regardless of the differences in their chosen future professions, the students themselves were similar. Nursing students *and* medical students both value IPE experiences in which they can hear all perspectives; pharmacy students *and* dental students value faculty members who facilitate IPE sessions. Regardless of their future careers, students are students. That statement may seem like common sense, but to me it was not. After reading and studying the IPE literature, I held a belief that a key concern for IPE was how to create educational materials that are meaningful for all participating students. Based on that, I expected to see differences in what the students valued about IPE instruction. However, these results challenged my assumptions. Based on my research findings, I now question if the best way to improve IPE instruction lies more with improving the faculty and less with teaching to the differences in students. I am excited to keep working in the IPE field to test out my ideas.

The third manuscript (chapter 4), was aimed at highlighting the qualities, behaviors, and teaching strategies of exemplary IPE faculty. Conducting this research was invigorating for me intellectually and challenged me methodologically. This research revealed three core, shared values about exemplary IPE faculty: (a) they express a high level of focus on their students; (b) they tend to be intrinsically motivated to learn and teach; and (c) they have a strong buy-in for IPE and IPP. I am enthusiastic to use these values as the foundation for future faculty development and support. I also am excited to continue working on the IPE Faculty Development Model. The data for this model was an unintentional find and piqued my interest around how faculty become experts in teaching. Are the trends seen from this data true for other IPE faculty? What about faculty from other institutions? If this model is supported, would it be useful for designing a program around IPE faculty development? Overall, these research findings generated more questions than answers for me. I look forward to continuing to pursue this area of scholarship.

Next Steps

This dissertation was inspired by the goal of expanding the knowledge about IPE educators in order to support them in their mission to implement, promote, and execute effective IPE programs, with the ultimate goal of improving healthcare, one student at a time. I am pleased with the progress I made towards my goal. I hope that the data and information gathered for this dissertation can be the building blocks for IPE faculty development and for my future scholarship in this area. Teaching IPE faculty about student-centric practices, such as flipped classroom or pair-and-share, and then

supporting them in the classroom to execute those practices would be an ideal first step. Another possible use for the data would be as the foundation for an IPE faculty evaluation tool. A mentor of mine, with extensive experience and knowledge in the IPE community, shared with me her experience with faculty evaluation and how the traditional educator questions (example: "How much did the instructor contribute") are often are not a good match for IPE learning. Unfortunately, this mismatch could led to poor performance reviews with extending consequences such as failed promotions and faculty not being willing to teach IPE or try new teaching strategies. Thinking about how the academic system judges and values faculty is important when trying to understand why faculty members engage (or refuse to engage) in new initiatives or develop new skills.

Another product of my dissertation, which I am enthusiastic to explore further is the IPE Faculty Development Model. At this stage, it represents a preliminary model due to the sample and geographic limitations. I look forward to expanding my sample of IPE faculty from a variety of IPE communities to confirm and expand the Faculty Development Model. Continuing to use the PD methodology and similar interviewing focus with additional IPE faculty will be useful. A "critical mass" of faculty interviews is needed to modify and confirm the model. Additionally, the PD methodology allowed me to form open and safe relationships with faculty that resulted in honest, vulnerable conversations. All of the participants shared with me things they believed they had done wrong or incorrectly in the classroom, even though I did not inquire about their failures, demonstrating a sense of security. Relationship building is key for this type of inquiry and PD appears to support open and transparent relationships between a researcher and

subjects. One change I would make in the future would be to have additional coders. Additional coders would help address concerns of bias and provide new perspectives on the data.

Another project this dissertation research findings suggests is needed is a multi data source view of IPE faculty. Using a combination of classroom observations and student, faculty, and peer interviews alongside objective data such as student outcomes and course evaluations could build a more complex picture of what makes IPE faculty excel. This dissertation can serve as a starting point for future research.

Riding Into the Sunset

Now it is time to reflect back to the beginning. Even after saturating myself in IPE literature and practice, I still have a great affinity for it. I believe in the necessity and effectiveness of IPE to create competent students who are ready for interprofessional practice (IPP). I believe that IPP is a key component to high quality healthcare for patients and a healthy healthcare community for staff. I am an optimist and I believe that healthcare can be improved; I want to do my part to that end by becoming an IPE educator and researcher. This dissertation was just the start.